The trend of increasing D/U ratio with increasing signal strength is observed for all receiver categories except for the automobile receiver category where the trend is reversed. For the -65 dBm desired signal level, the difference in performance of the median receiver in the best performing category (automobile) and the worst performing category (clock) is 12.8 dB. For a desired signal level of -45 dBm, the difference in performance of the median receiver in the best performing category (automobile) and the worst performing category (portable) increases to 33.4 dB.

5.4 Second Adjacent Channel Test Results

The second adjacent channel test results also show a wide range of performance. The difference in performance between the best and worst performing receiver for each of the three desired power levels is approximately 60 dB.

The D/U ratio required to produce interference in the median receiver is higher for the 2nd adjacent channel than that for the 3rd adjacent channel by approximately 9 dB. This means that interference is produced in the median receiver by a 2nd adjacent channel station at an interfering signal level 9 dB lower than would be required for an interfering signal on a 3rd adjacent channel.

The FCC mileage separations for 2nd adjacent channel stations in the non-reserved band are based on a D/U protection ratio of -40 dB. The test results indicate that of the total 28 receivers tested, 23 will experience interference at a D/U ratio equal to the current FCC 2nd adjacent channel protection ratio, for a desired signal level of -45 dBm (Table 3). At desired signal levels of -55 dBm and -65 dBm, 22 receivers will experience interference at a D/U ratio equal to the present 2nd adjacent channel protection ratio.

As was the case for 3rd adjacent channel interference, a substantial increase is observed in the D/U ratio required to produce interference in the median receiver with increasing desired signal strength. The D/U ratios required to produce interference in the median receiver for desired signal levels of -65 dBm, -55 dBm, and -45 dBm are -30.5 dB, -23.7 dB, and -17 dB, respectively.

Table 7 below presents the test results for the median receiver in each receiver category for 2nd adjacent channel interference.

Table 7 - Median Receiver Performance by Category
2nd Adjacent Channel Interference

	- 45 dBm	- 55 dBm	- 65 dBm
Automobile	-44.8	-43.5	-41.9
Clock	-15.8	-16.7	-17.2
Component	-21.8	-31.4	-39.1
Personal	-15.8	-25.6	-32.3
Portable	-10.0	-16.7	-22.8

The disparity in receiver performance between the five receiver categories is greater than was observed for 3rd adjacent channel interference. For the -65 dBm desired signal level, the difference in performance of the median receiver in the best performing category (automobile) and the worst performing category (clock) is 24.7 dB. For a desired signal level of -45 dBm, the difference in performance of the median receiver in the best performing category (automobile) and the worst performing category (portable) increases to 34.8 dB. The trend of increasing D/U ratio with increasing signal strength is again observed for all receiver categories except for the automobile receiver category where the trend is reversed.

APPENDIX A

DESCRIPTION OF FM RECEIVERS TESTED

Description of FM Receivers Tested

Automobile

Make	Model	Serial Number	Description
Blaupunkt	MESA CR67	BP7413W2785625	Car Stereo
Chrysler	PO485861AD	NO	OEM Car Stereo
Delco	16232113	2131	OEM Car Stereo
Ford	F87F-19B132-AB	NO	OEM Car Stereo
Jensen	XCC5220	ORR002326	Car Stereo
JVC	KS-RX177	113H2496	Car Stereo
Kenwood	KDC-S5009	80405408	Car Stereo
Pioneer	DEH-1000	TATM013945UC	Car Stereo

Clock

Make	Model	Serial Number	Description
Aiwa	FR-A37U	S21LI88I0351	AM/FM Clock Radio
General Electric	7-4852A	NO	AM/FM Dual Wake Clock Radio
Philips/Magnavox	AJ3840/17M	KZ009843097244	AM/FM Dual Alarm Clock Radio
Sony	ICF-C121	1412093	AM/FM Clock Radio
Zenith	Z212G	2181084	AM/FM/TV/Weather Radio with Remote

Component

Make	Model	Serial Number	Description
JVC	RX-554VBK	113X0299	AM/FM Stereo Receiver-Amplifier
Kenwood	VR-205	8110029	AM/FM Stereo Receiver-Amplifier
Pioneer	VSX-D557	SIDIO18717US	AM/FM Stereo Receiver-Amplifier
Sharp	MD-X5	70800324	AM/FM Stereo MD/CD MicroSystem
Sony	STR-DE525	8831310	AM/FM Stereo Receiver-Amplifier

Description of FM Receivers Tested (cont.)

Personal

Make	Model	Serial Number	Description
Aiwa	HS-TX386	S08LV8830637	Personal AM/FM Radio with Cassette
Philips/Magnavox	AQ6688/17Z	14446	Personal AM/FM Radio with Cassette
Sony	SRF-49	1188972	Personal AM/FM Radio
Sony	SRF-HM55	555868	Personal AM/FM Headset Radio
Sony	WM-FS191	1249411	Personal AM/FM Radio with Cassette

Portable

Make	Model	Serial Number	Description
Emerson	PS6528	90124954LG	Portable AM/FM Stereo with Cassette
Panasonic	RX-CS720	GK8AB38749	Portable AM/FM Stereo with Cassette
Radio Shack	12-639A	NO	Portable AM/FM Stereo
RCA	RP7700	NO	Portable AM/FM Stereo with Cassette
Sony	CFD-Z110	1439435	Portable AM/FM Stereo with Cassette

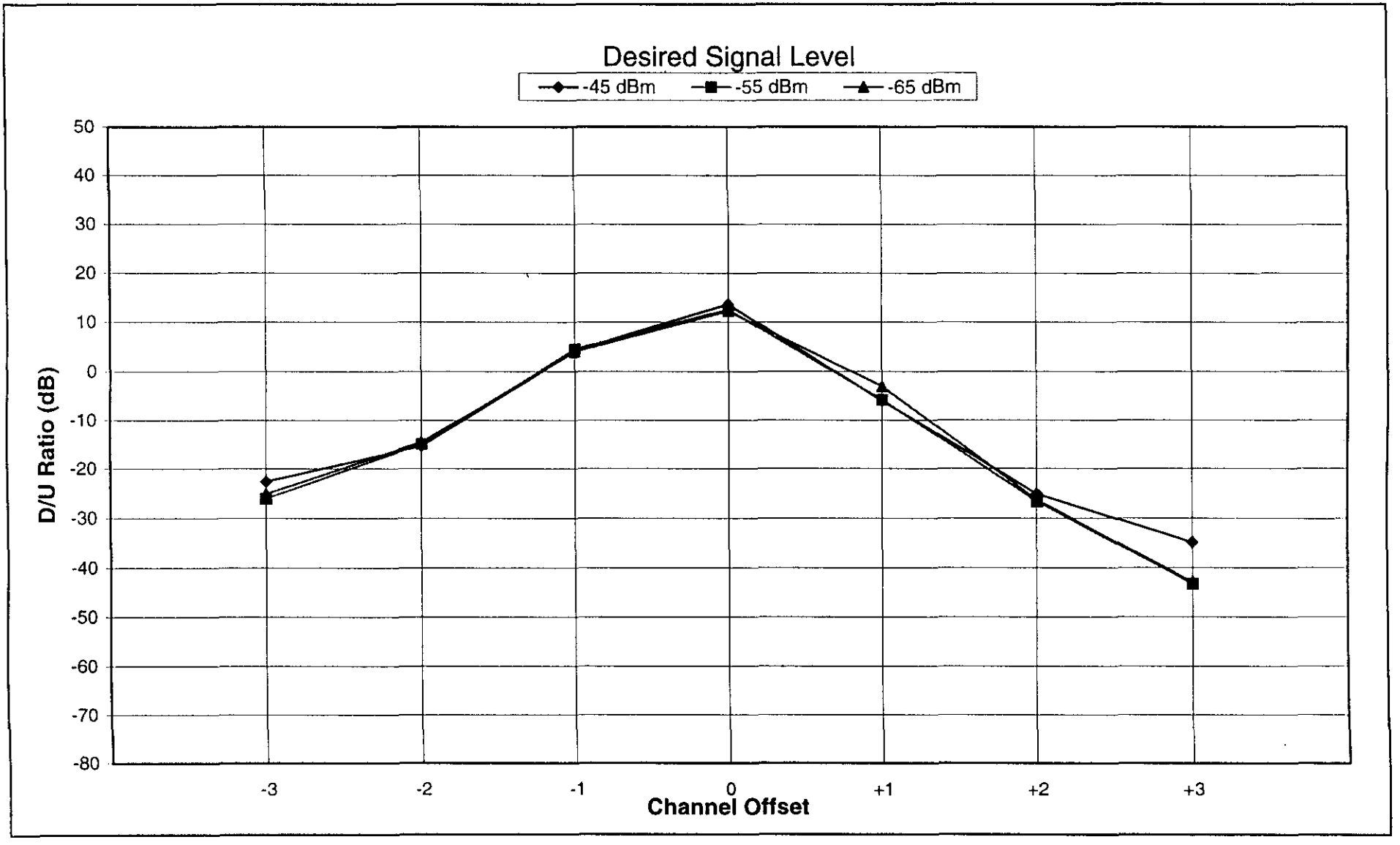
APPENDIX B

GRAPHICAL PRESENTATION OF RECEIVER INTERFERENCE TEST RESULTS

Type: Clock

Receiver Performance

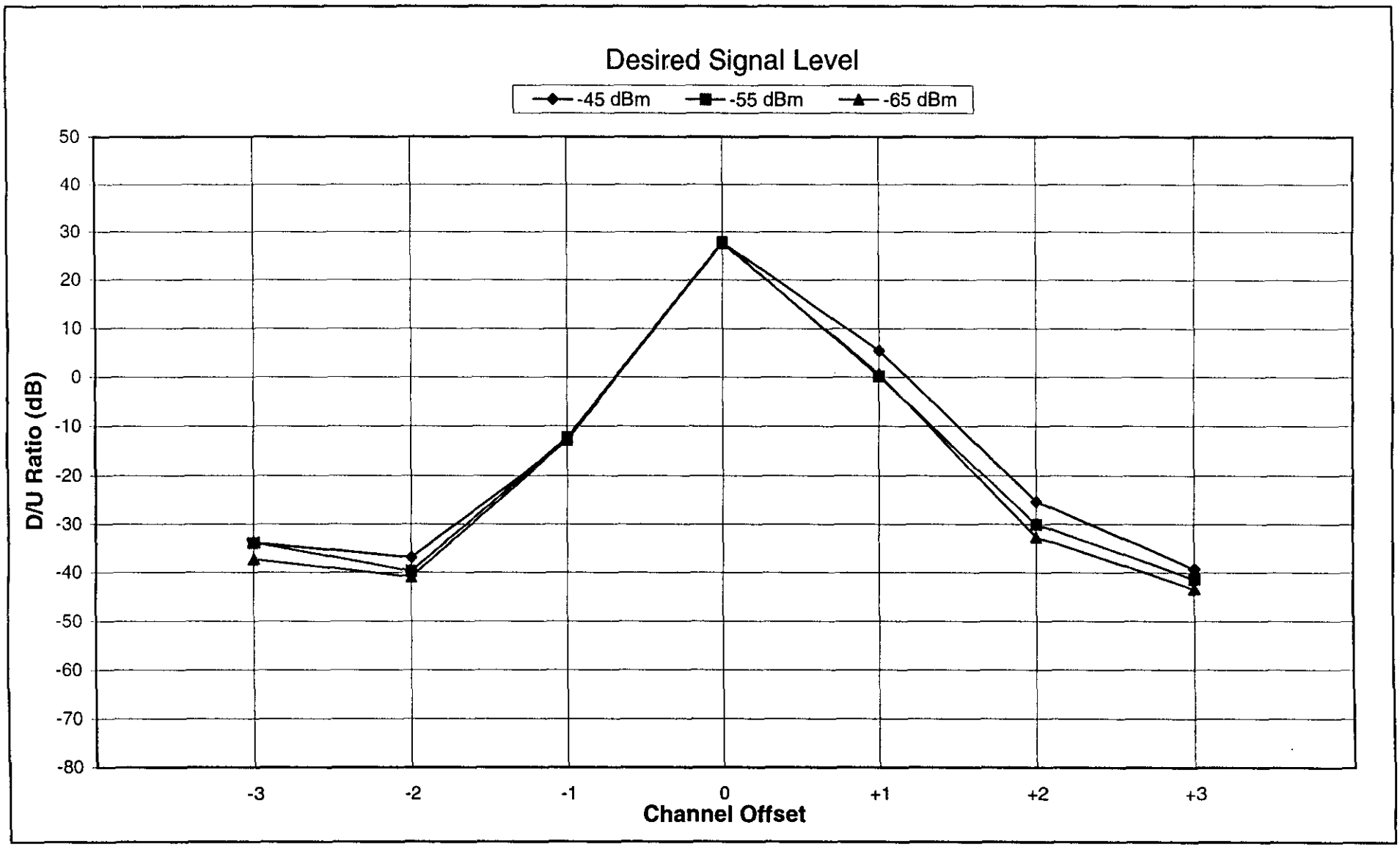
Receiver #1



Type: Clock

Receiver Performance

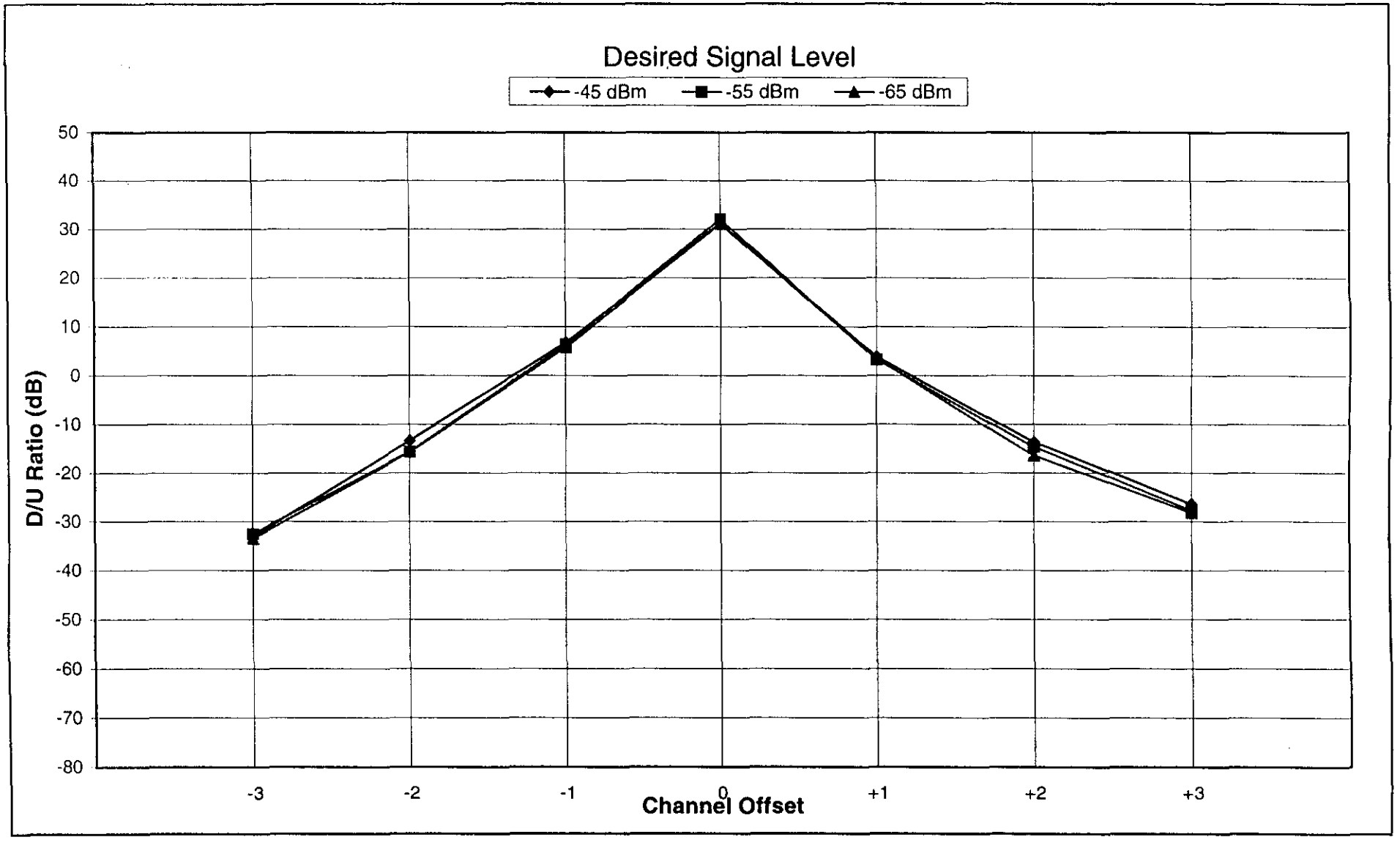
Receiver #2



Type: Clock

Receiver Performance

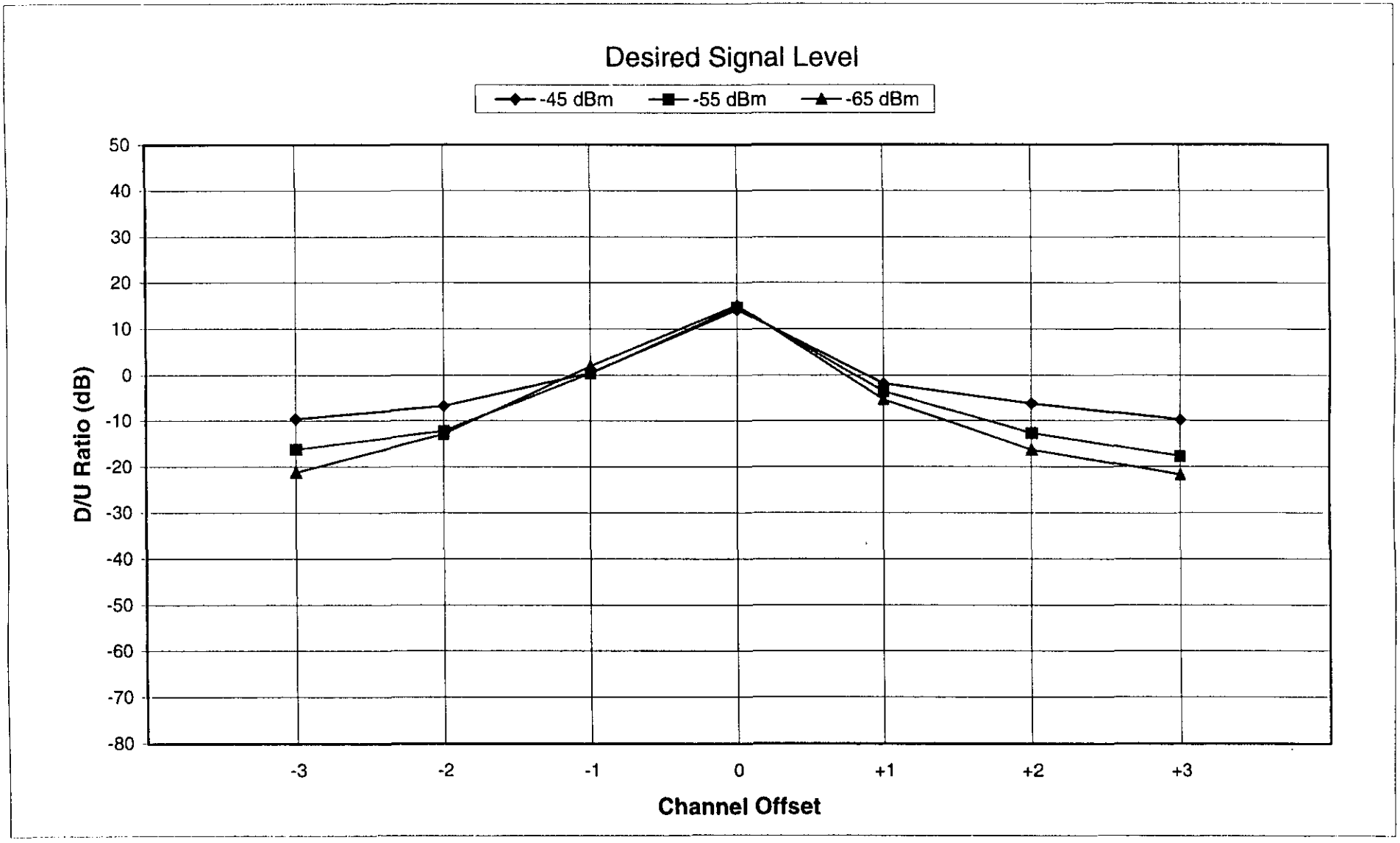
Receiver #3



Type: Clock

Receiver Performance

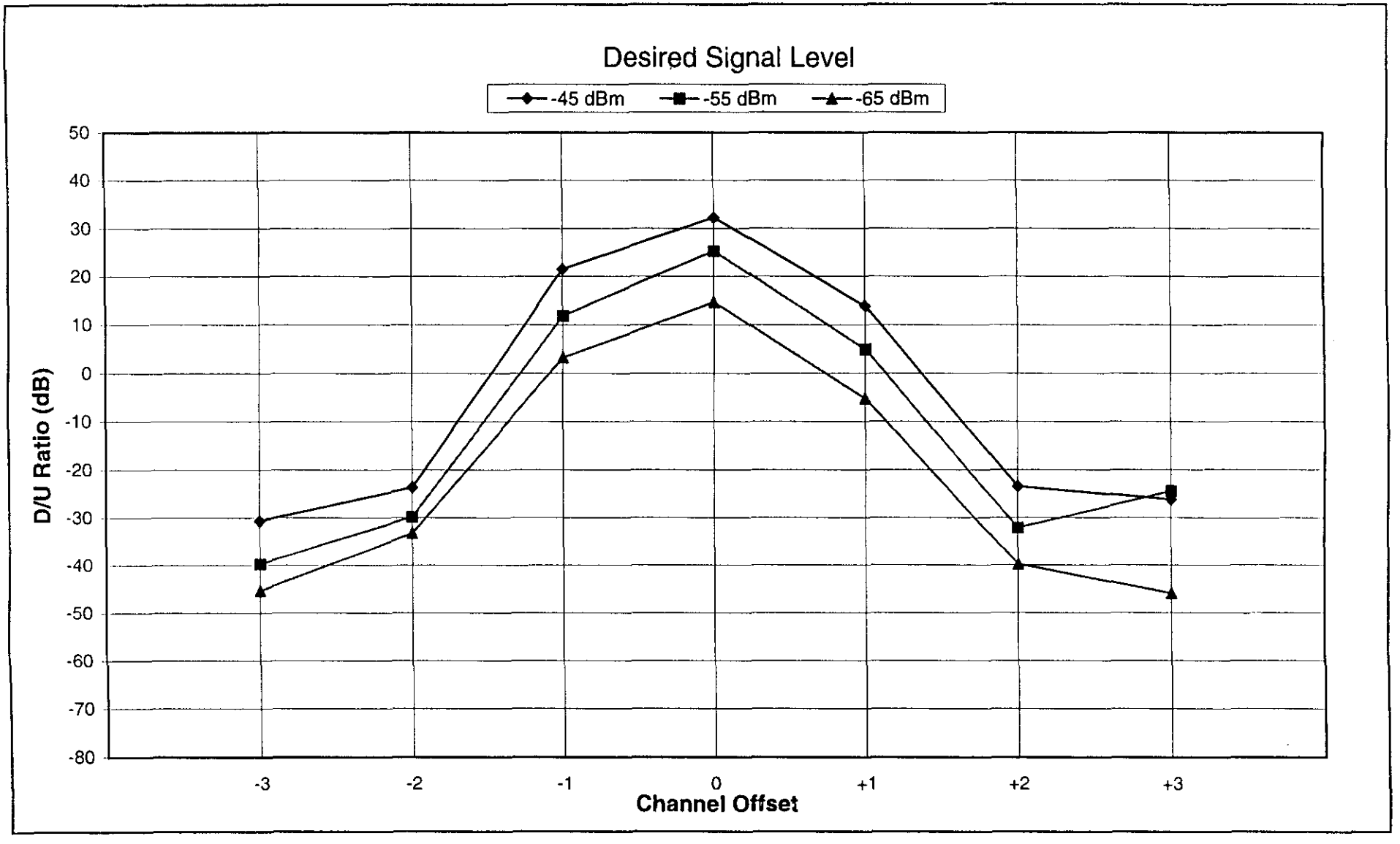
Receiver #4



Type: Personal

Receiver Performance

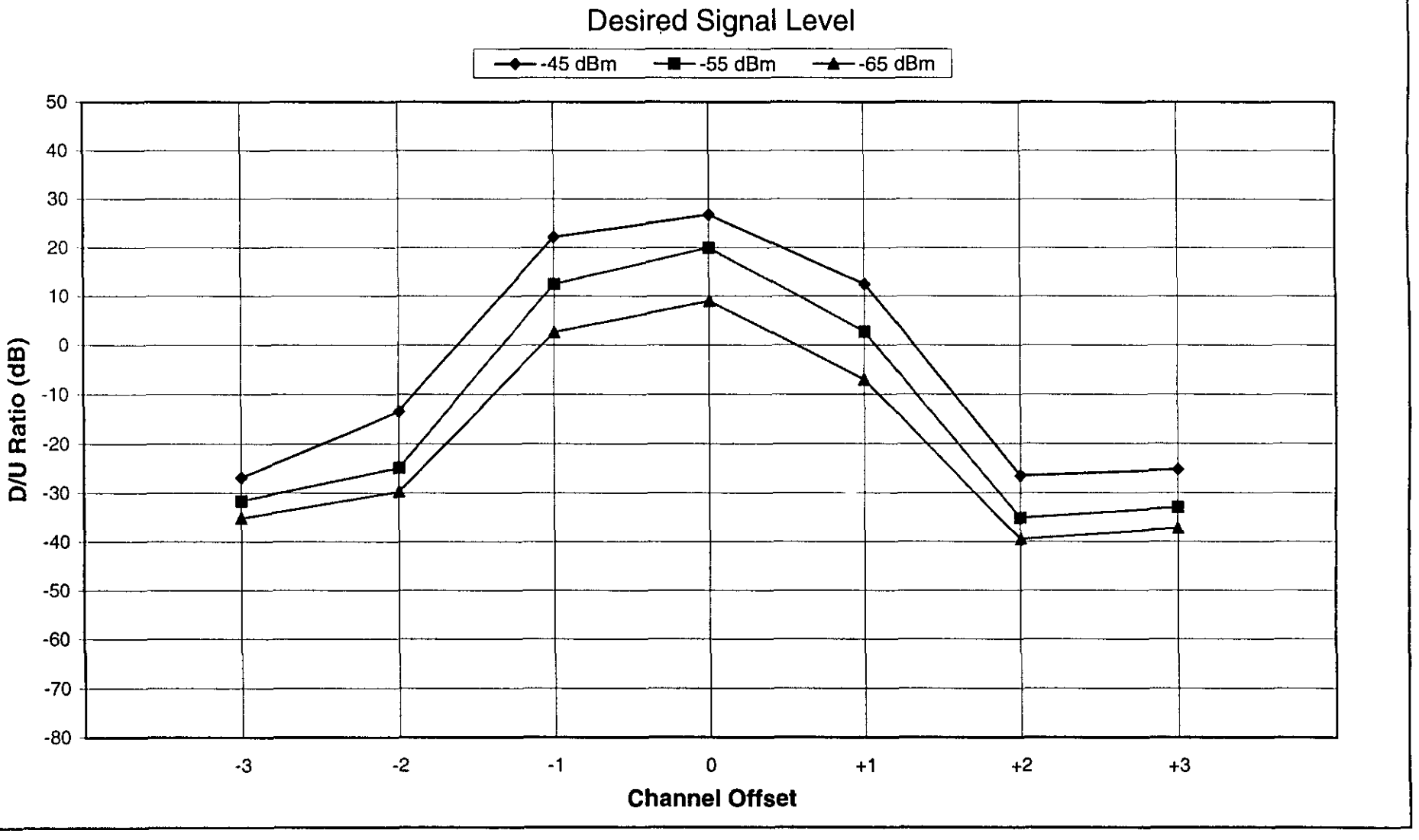
Receiver #5



Type: Personal

Receiver Performance

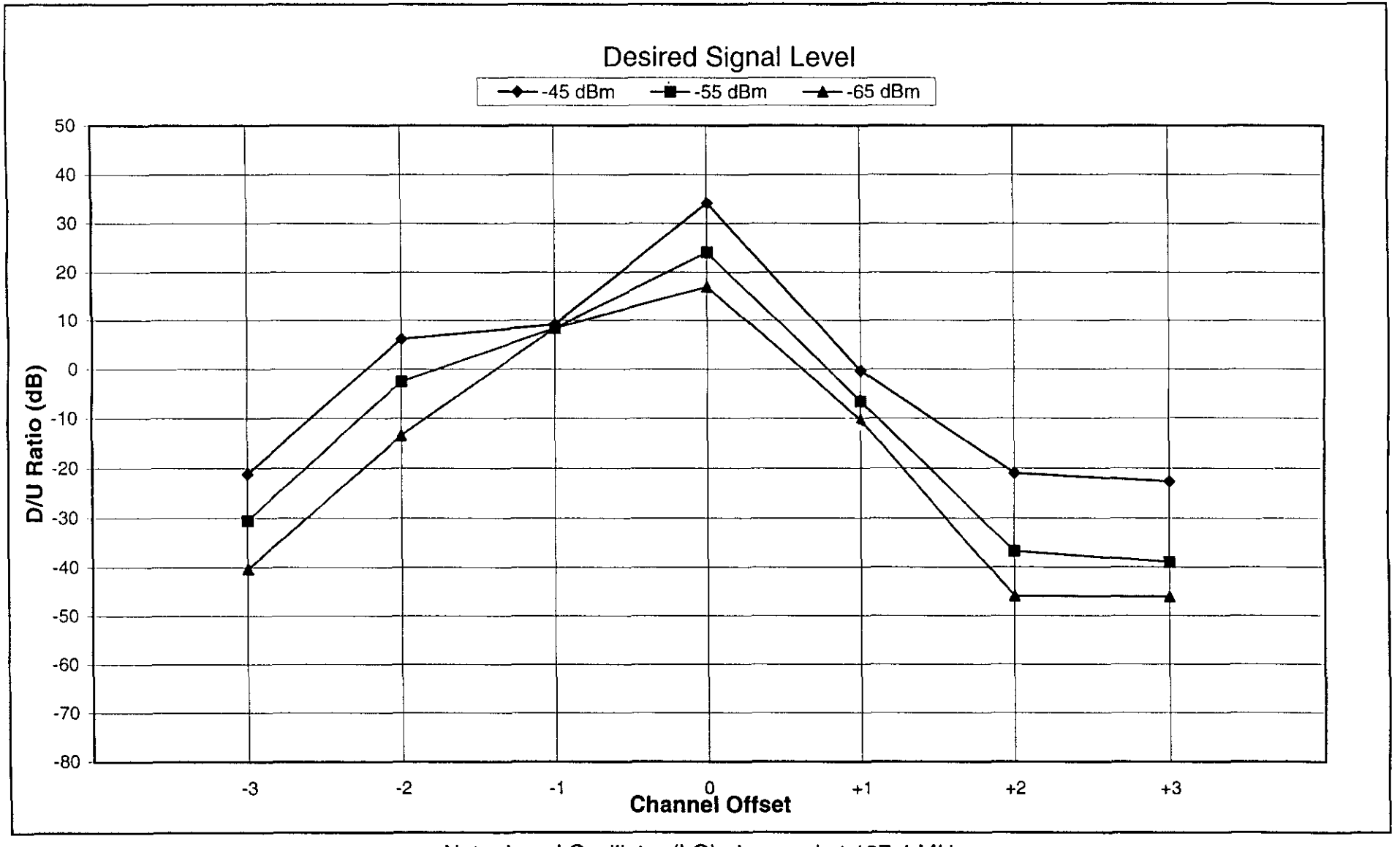
Receiver #6



Type: Personal

Receiver Performance

Receiver #7

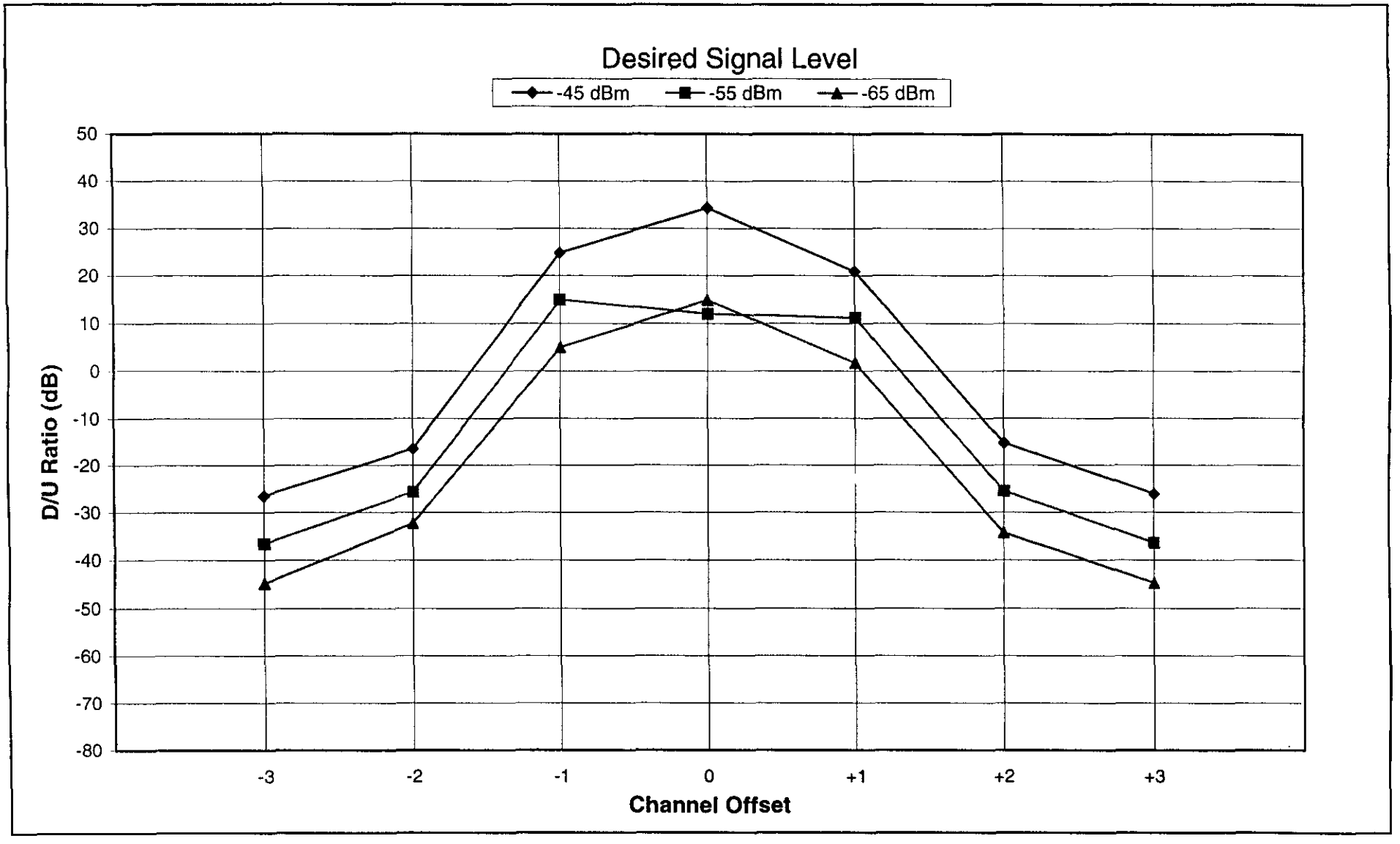


Note: Local Oscillator (LO) observed at 127.4 MHz

Type: Personal

Receiver Performance

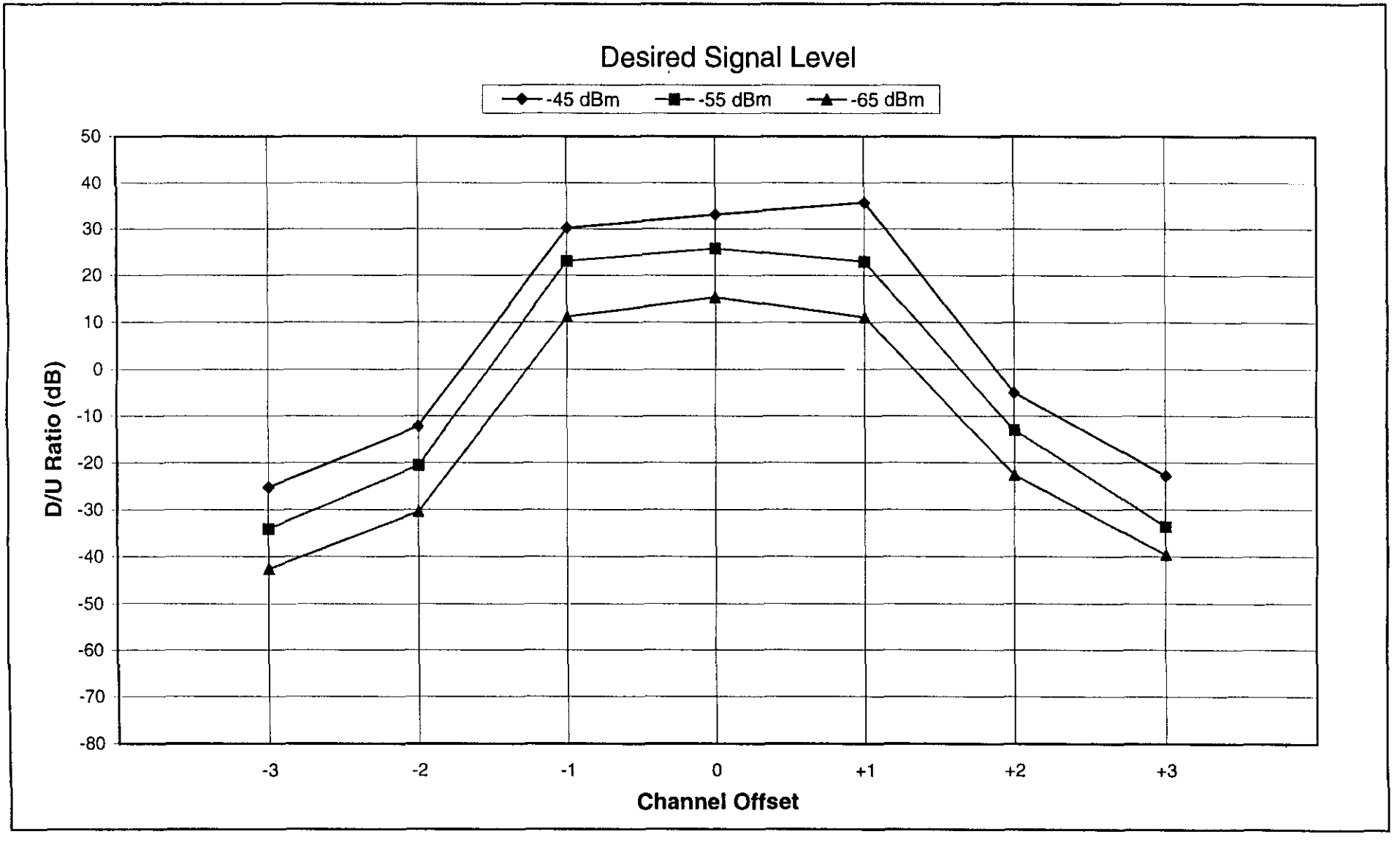
Receiver #8



Type: Personal

Receiver Performance

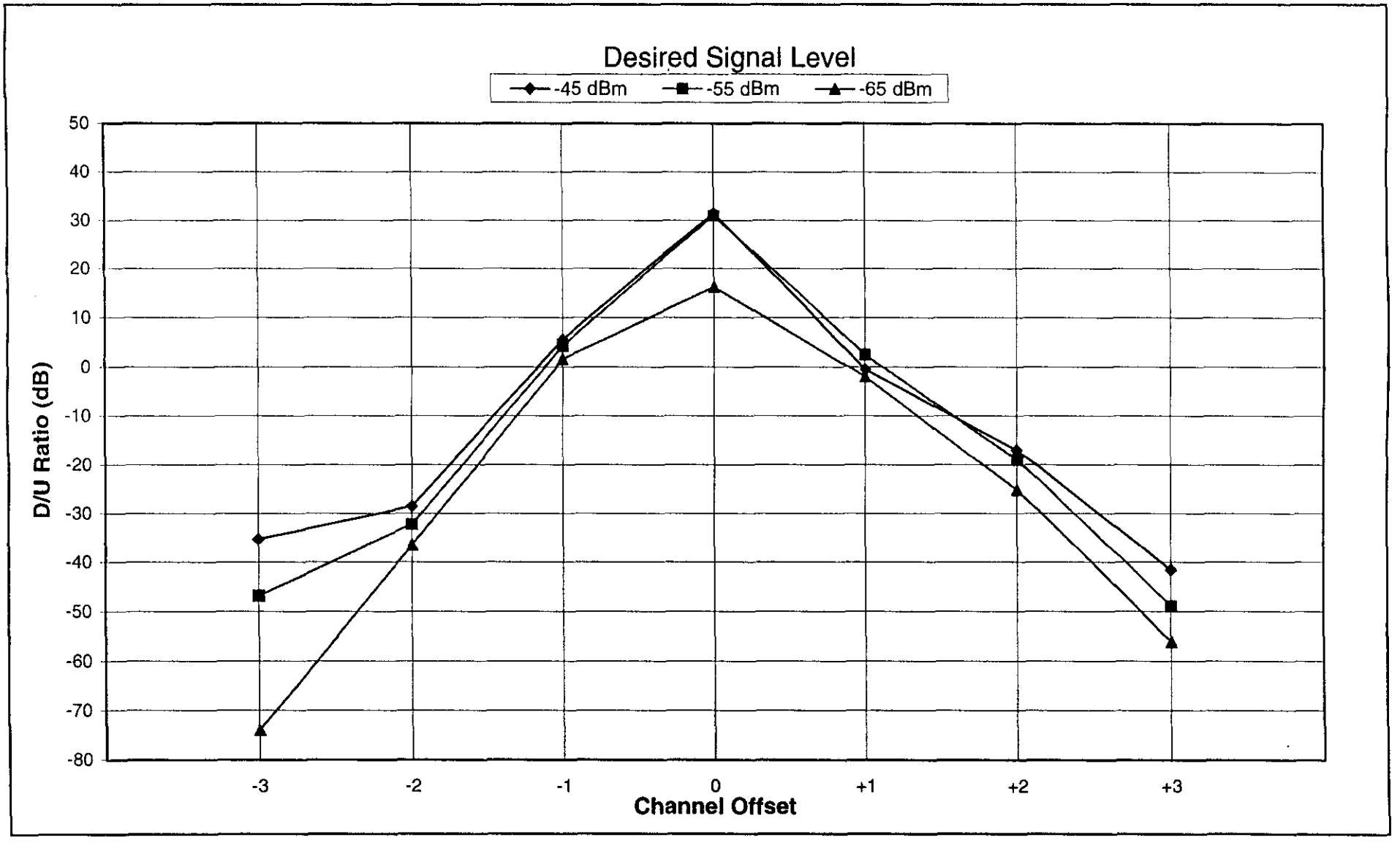
Receiver #9



Type: Portable

Receiver Performance

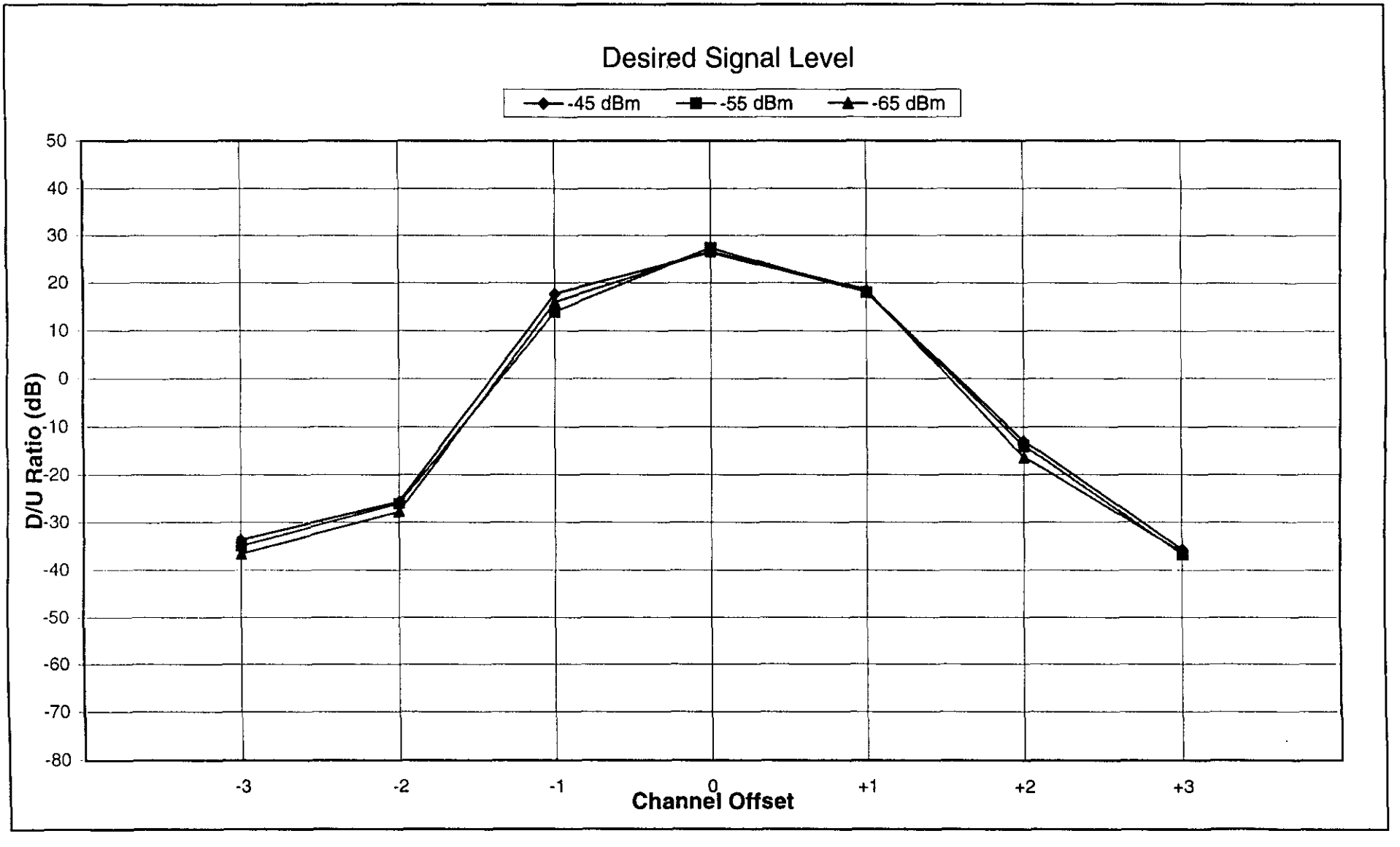
Receiver #10



Type: Clock

Receiver Performance

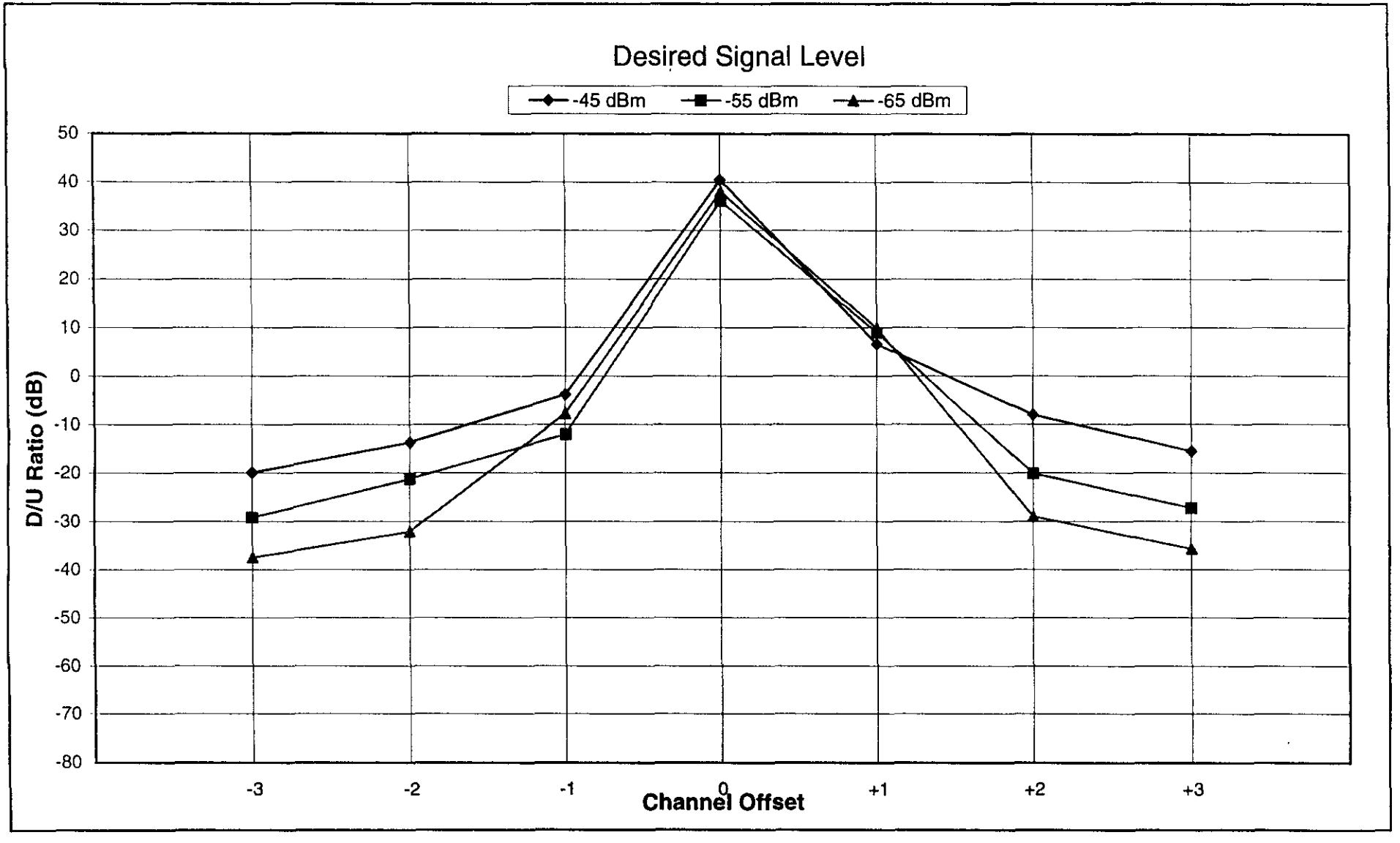
Receiver #11



Type: Portable

Receiver Performance

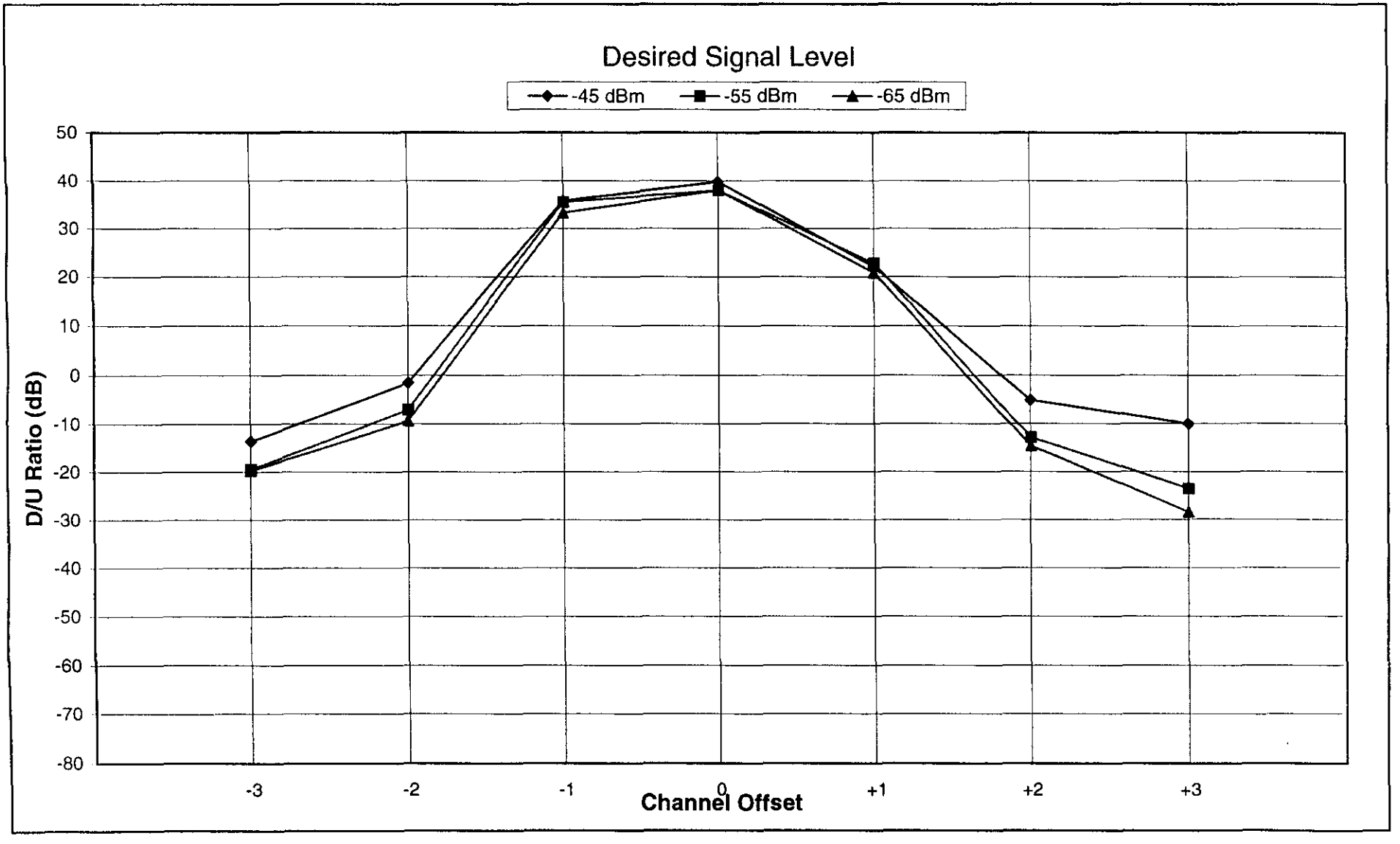
Receiver #12



Type: Portable

Receiver Performance

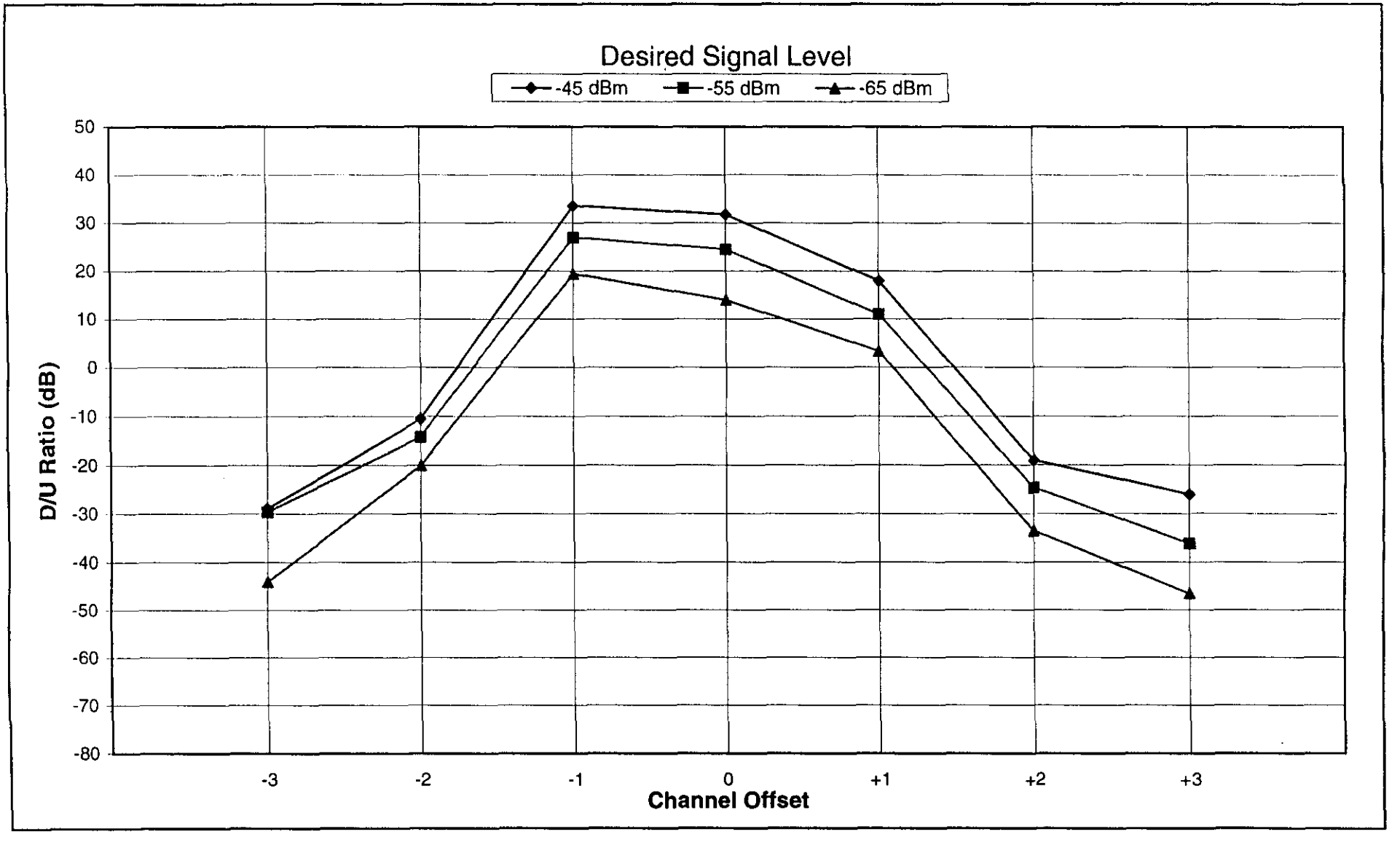
Receiver #13



Type: Portable

Receiver Performance

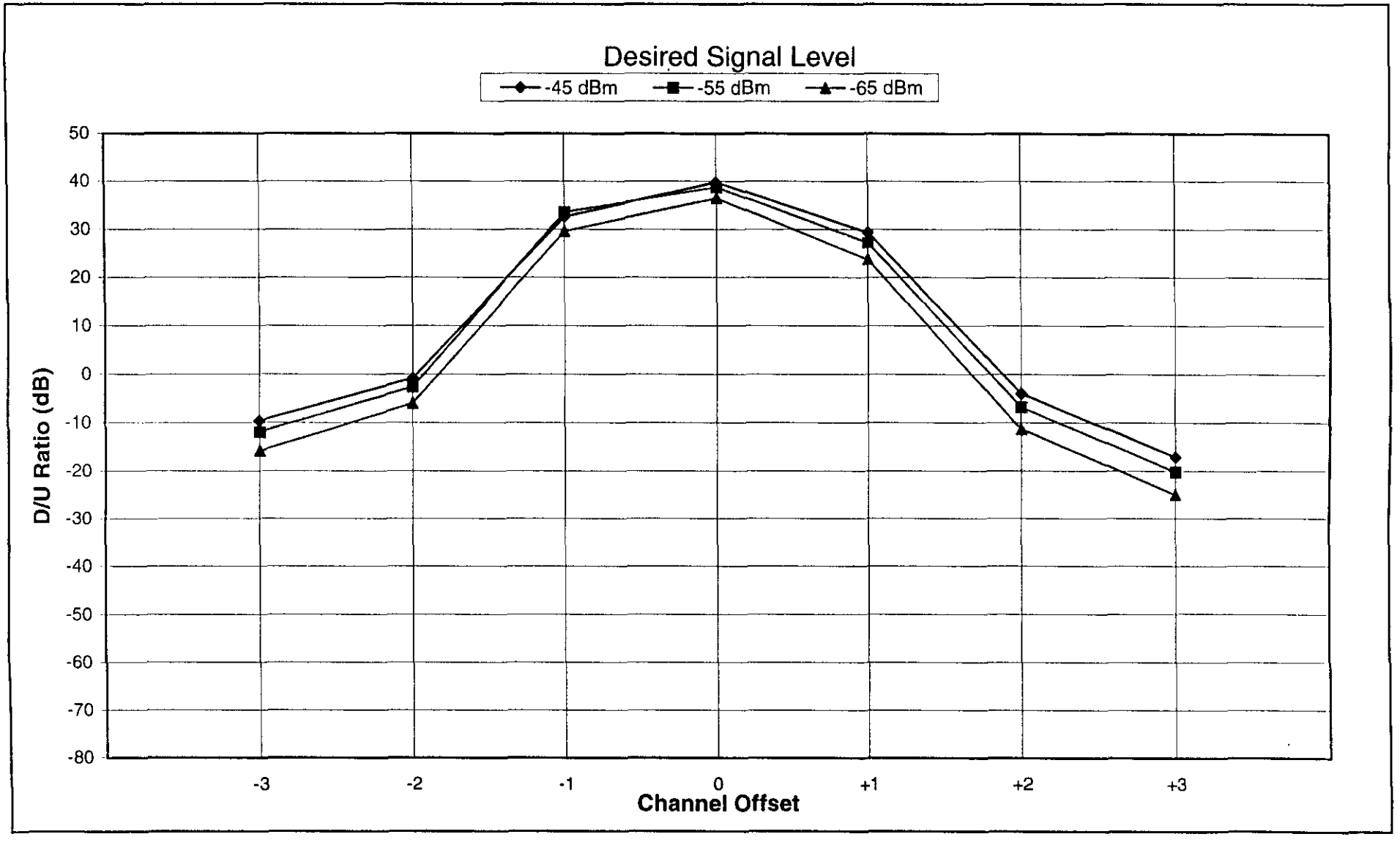
Receiver #14



Type: Portable

Receiver Performance

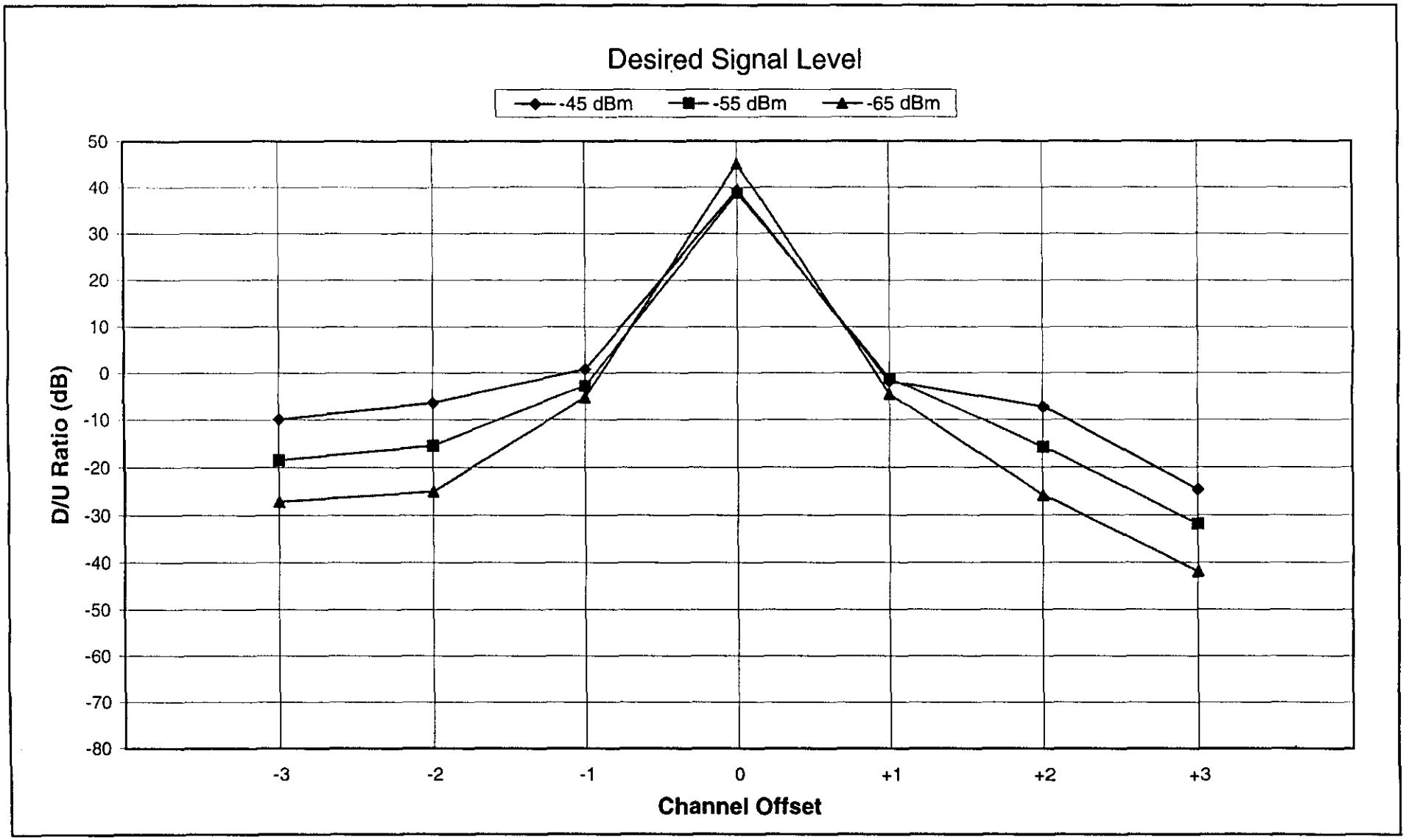
Receiver #15



Type: Component

Receiver Performance

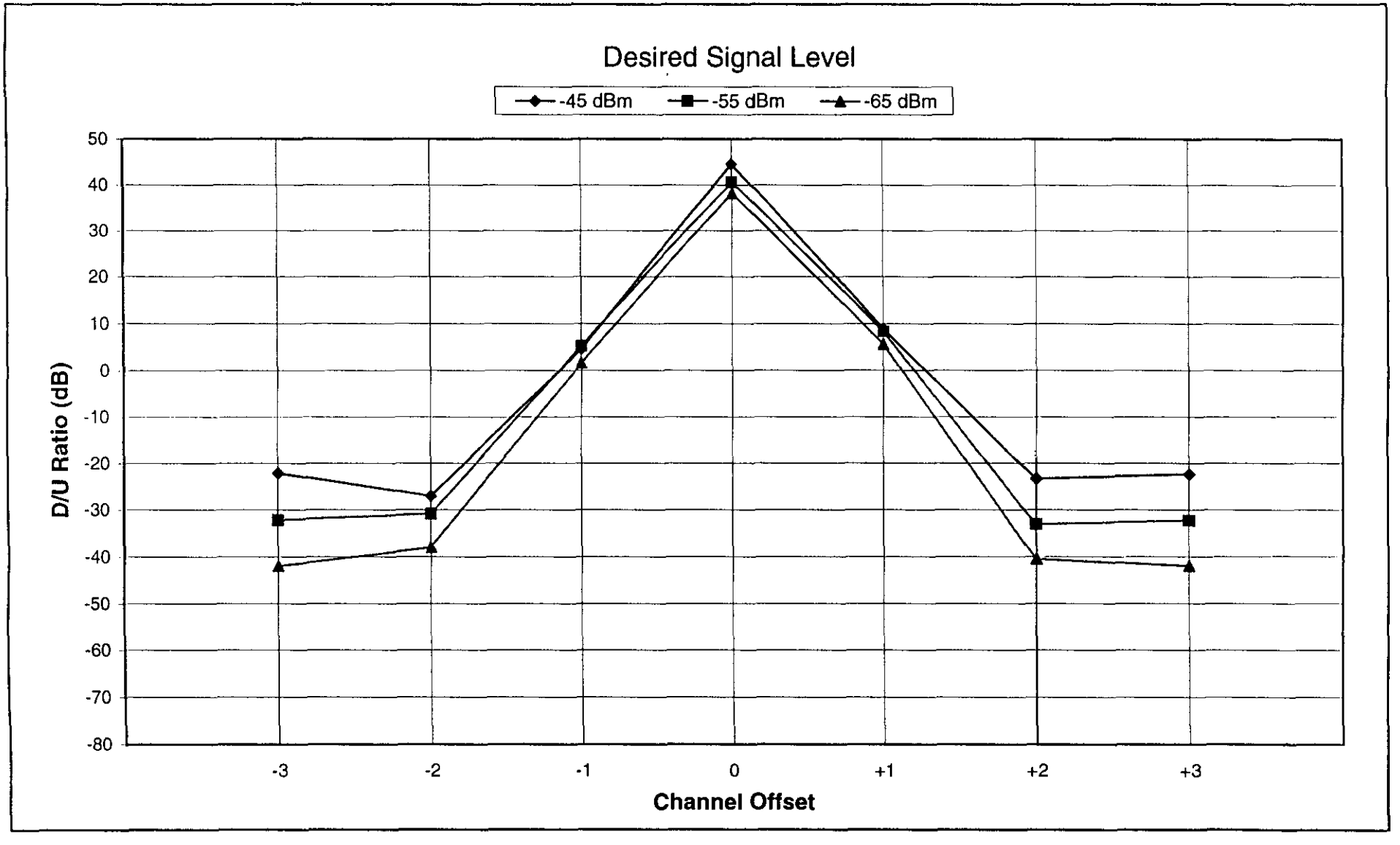
Receiver #16



Type: Component

Receiver Performance

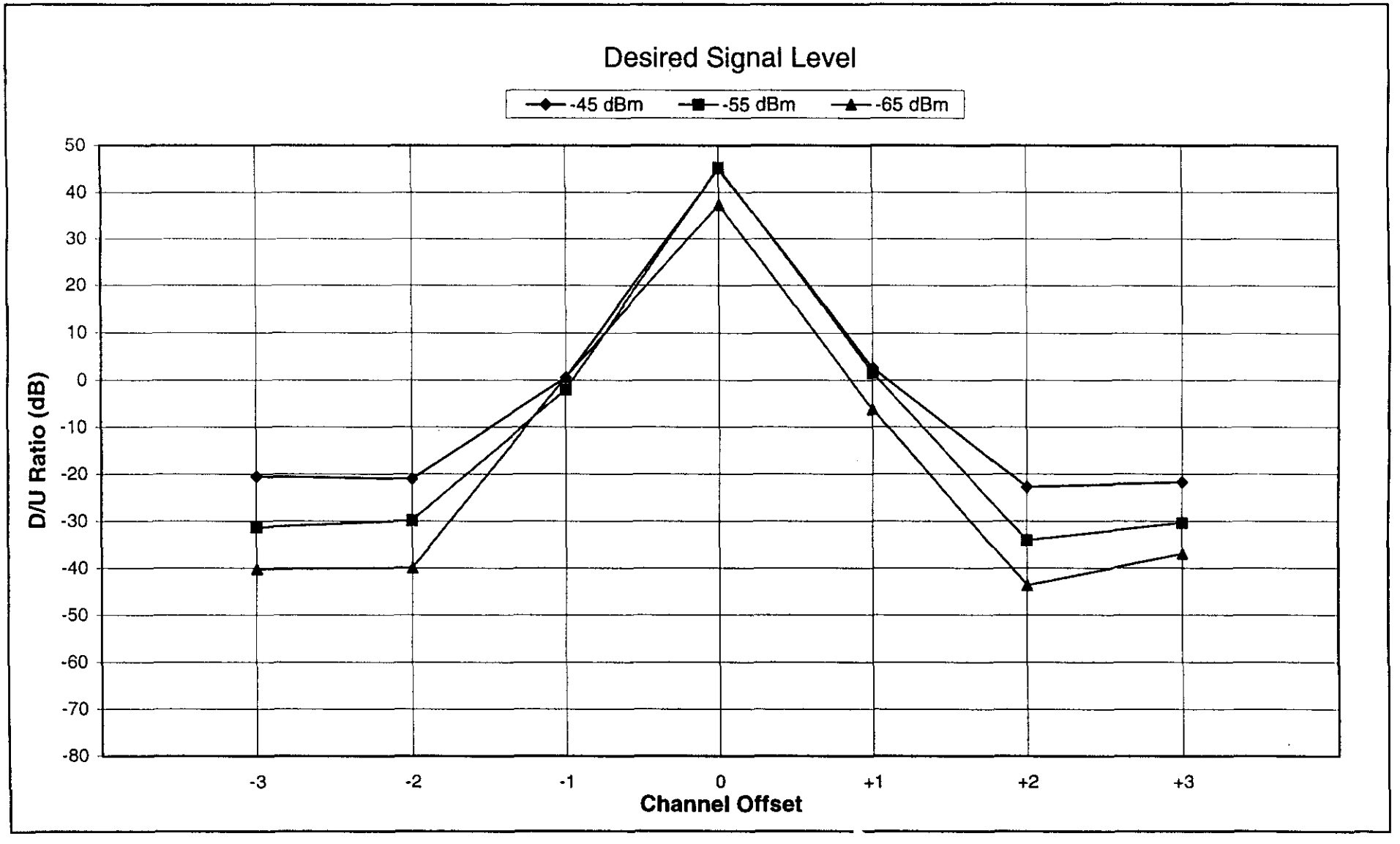
Receiver #17



Type: Component

Receiver Performance

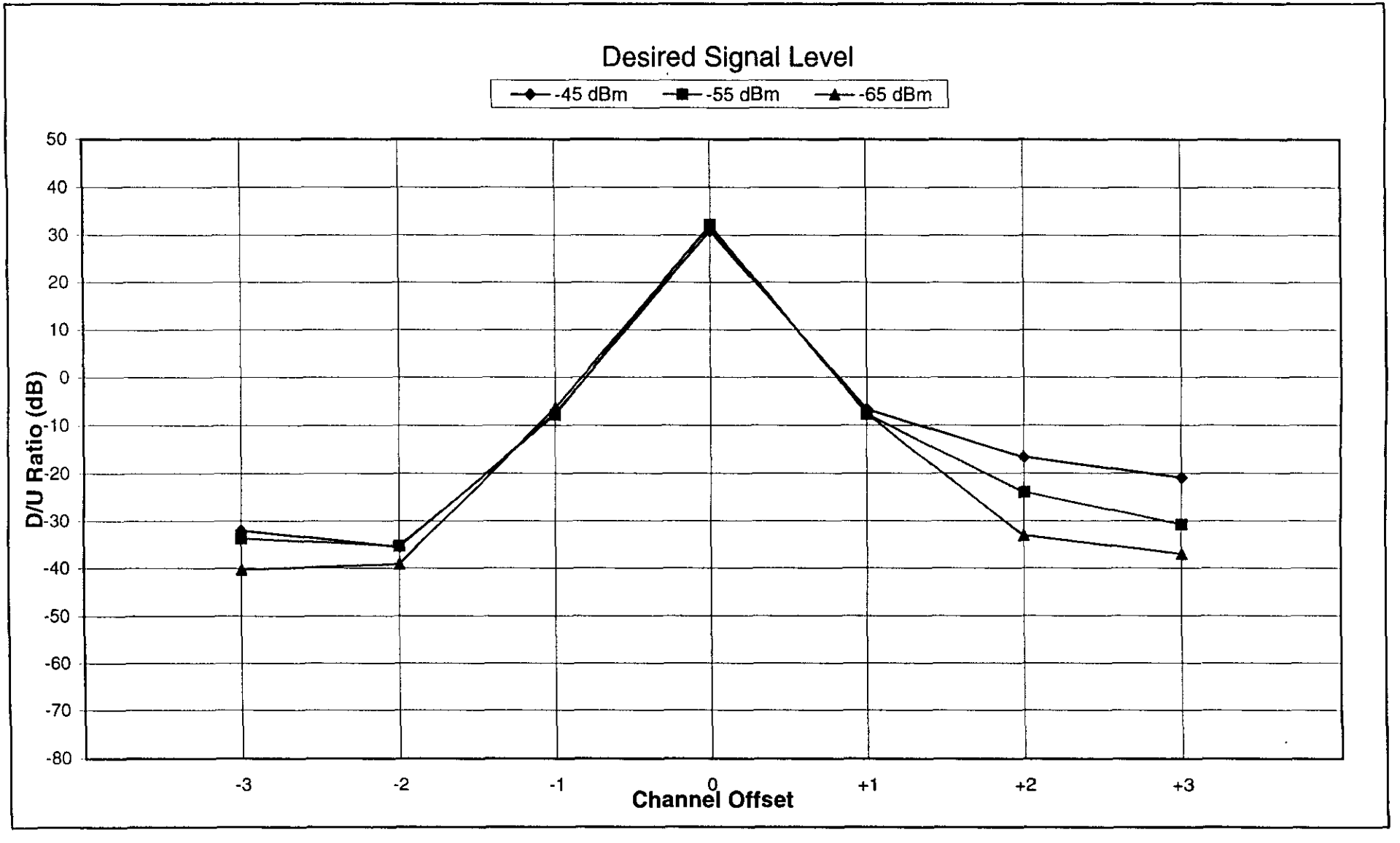
Receiver #18



Type: Component

Receiver Performance

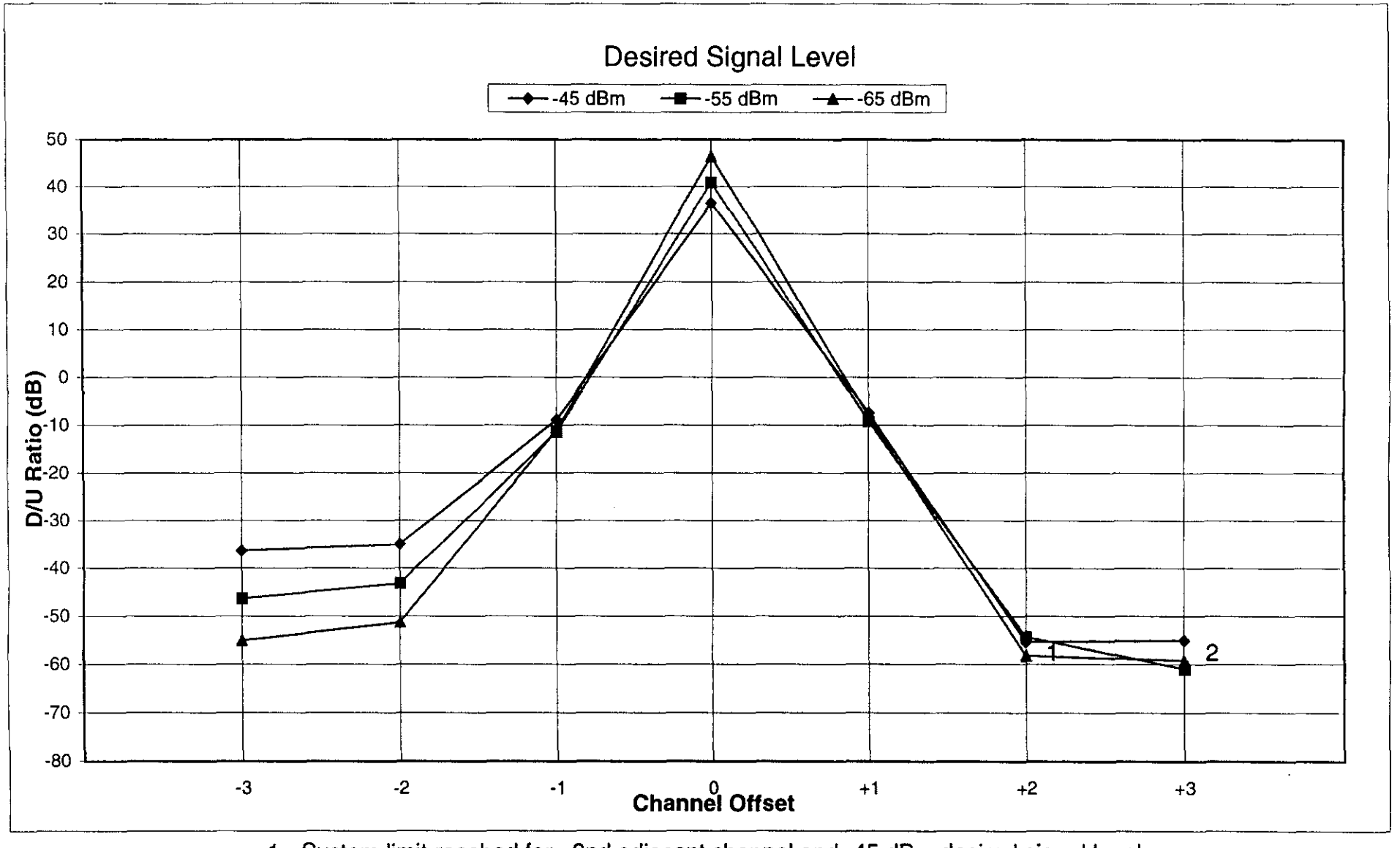
Receiver #19



Type: Component

Receiver Performance

Receiver #20

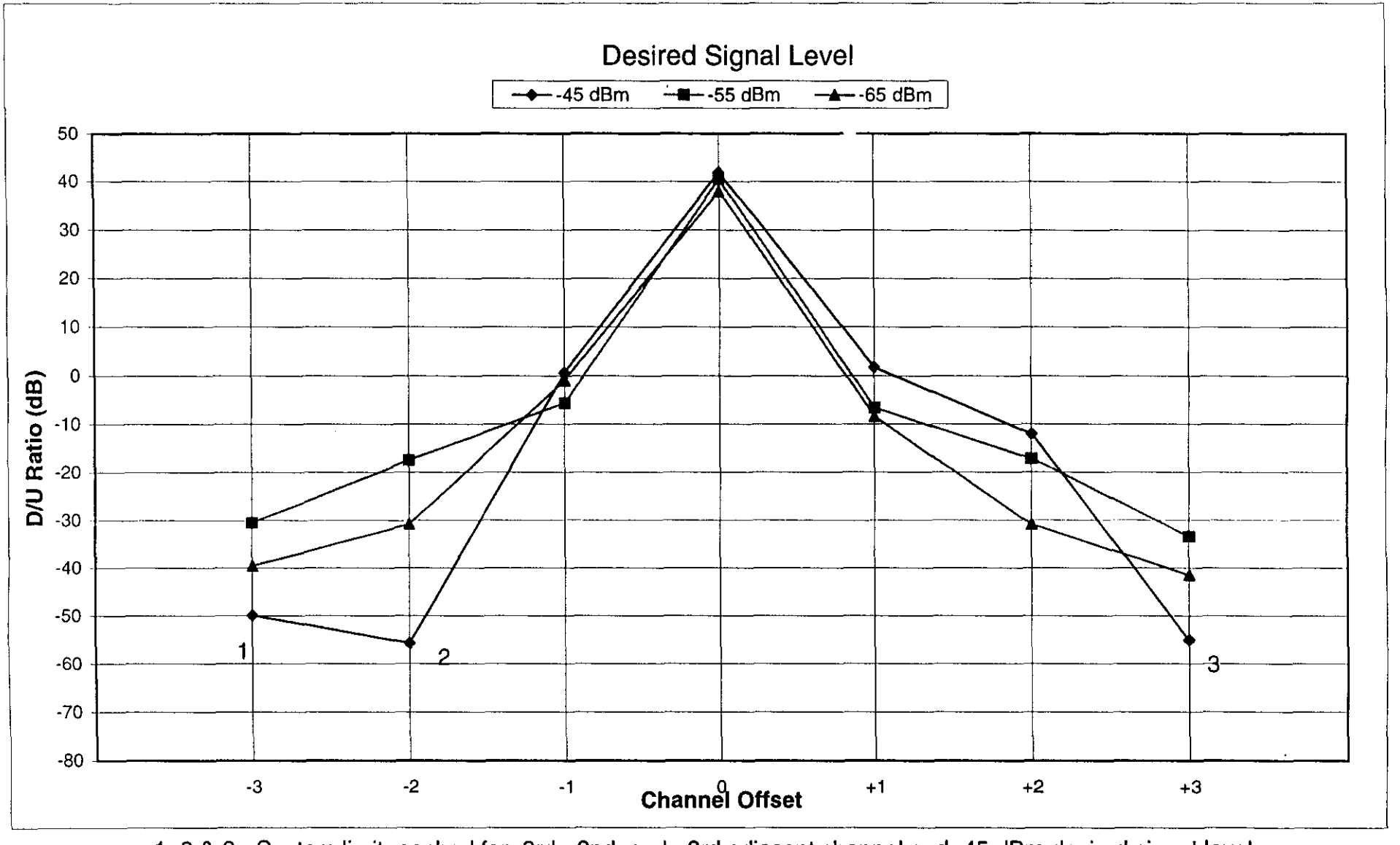


1 - System limit reached for +2nd adjacent channel and -45 dBm desired signal level
2 - System limit reached for +3rd adjacent channel and -45 dBm desired signal level

Type: Automobile

Receiver Performance

Receiver #21

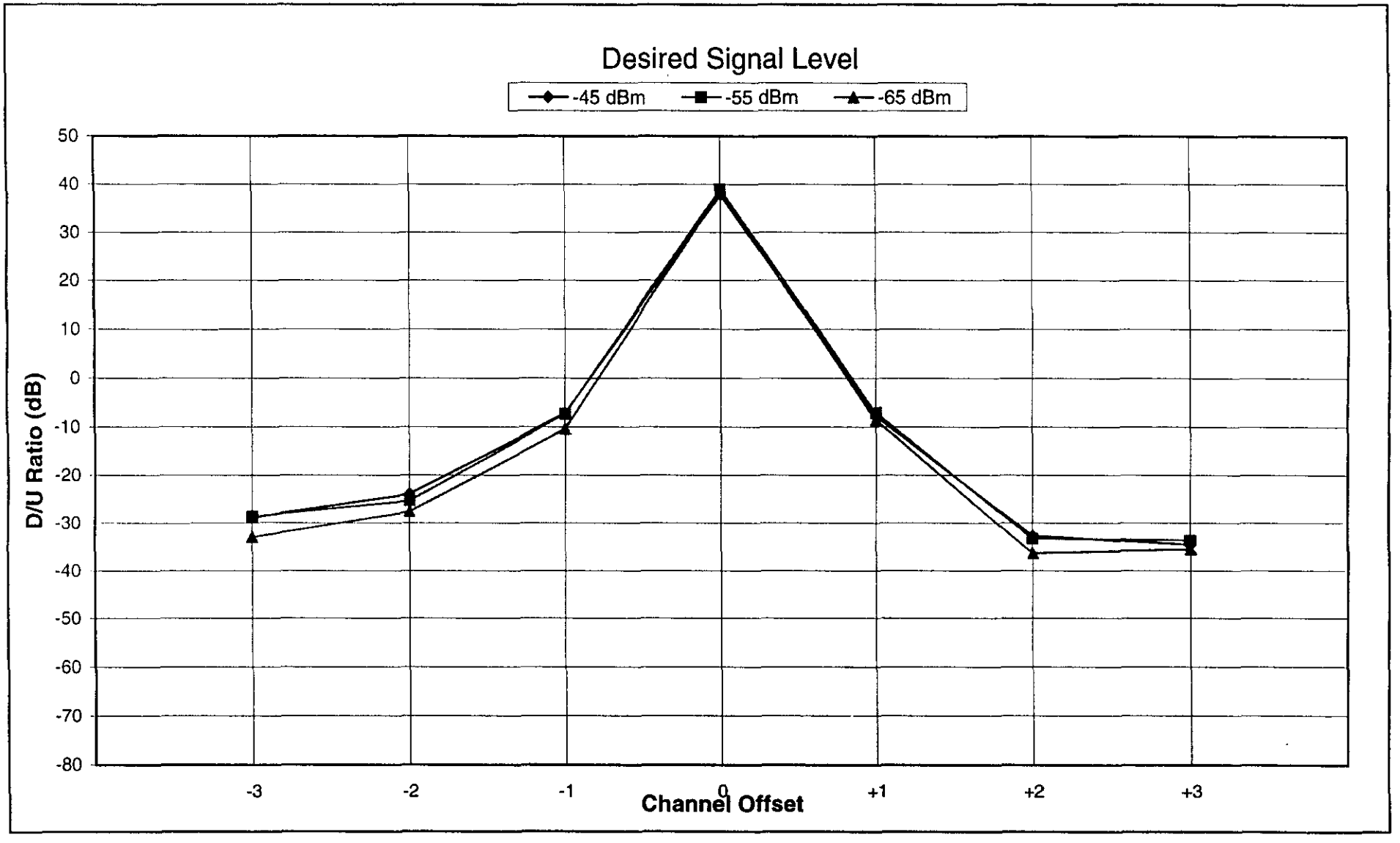


1, 2 & 3 - System limit reached for -3rd, -2nd, and +3rd adjacent channel and -45 dBm desired signal level

Type: Automobile

Receiver Performance

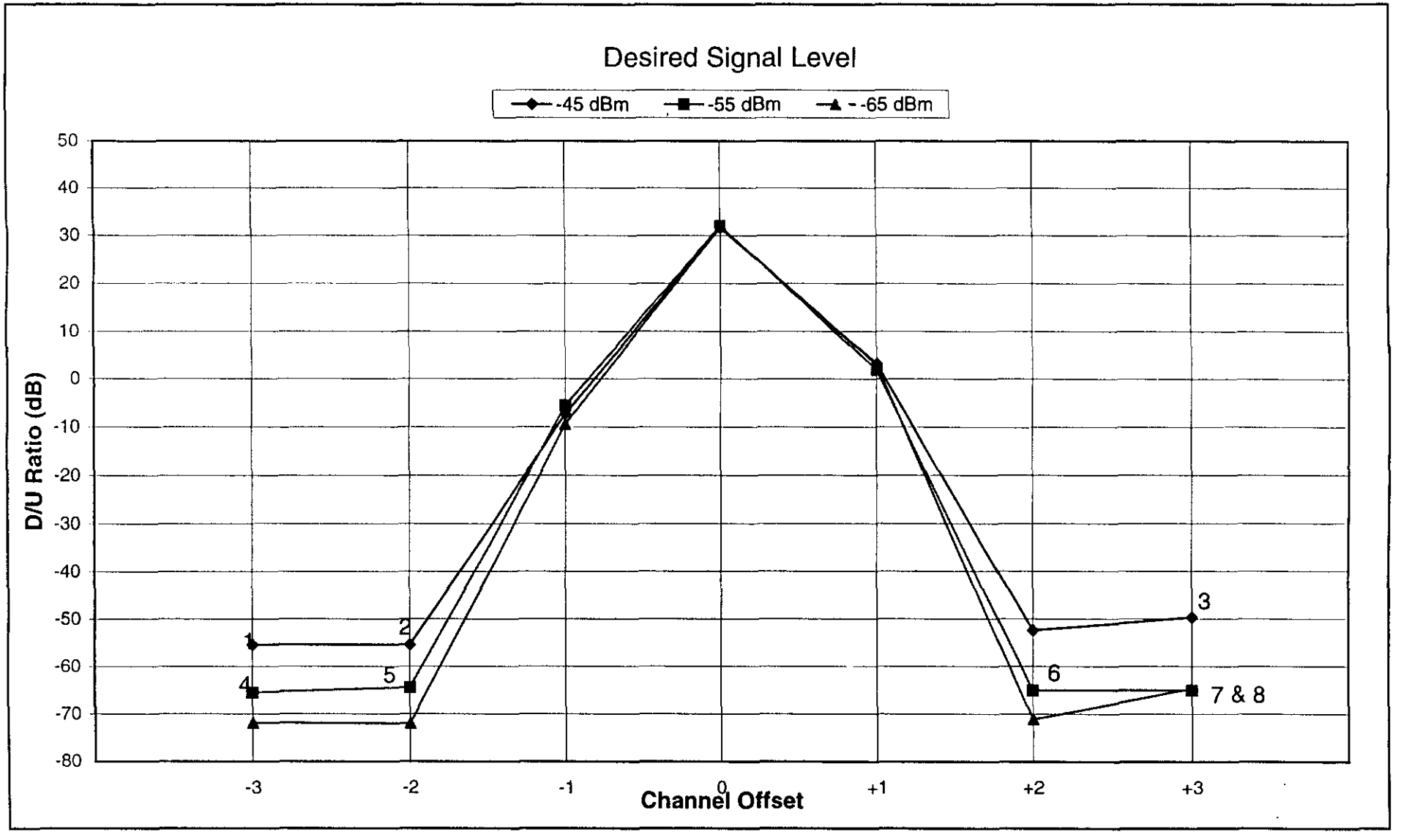
Receiver #22



Type: Automobile

Receiver Performance

Receiver #23

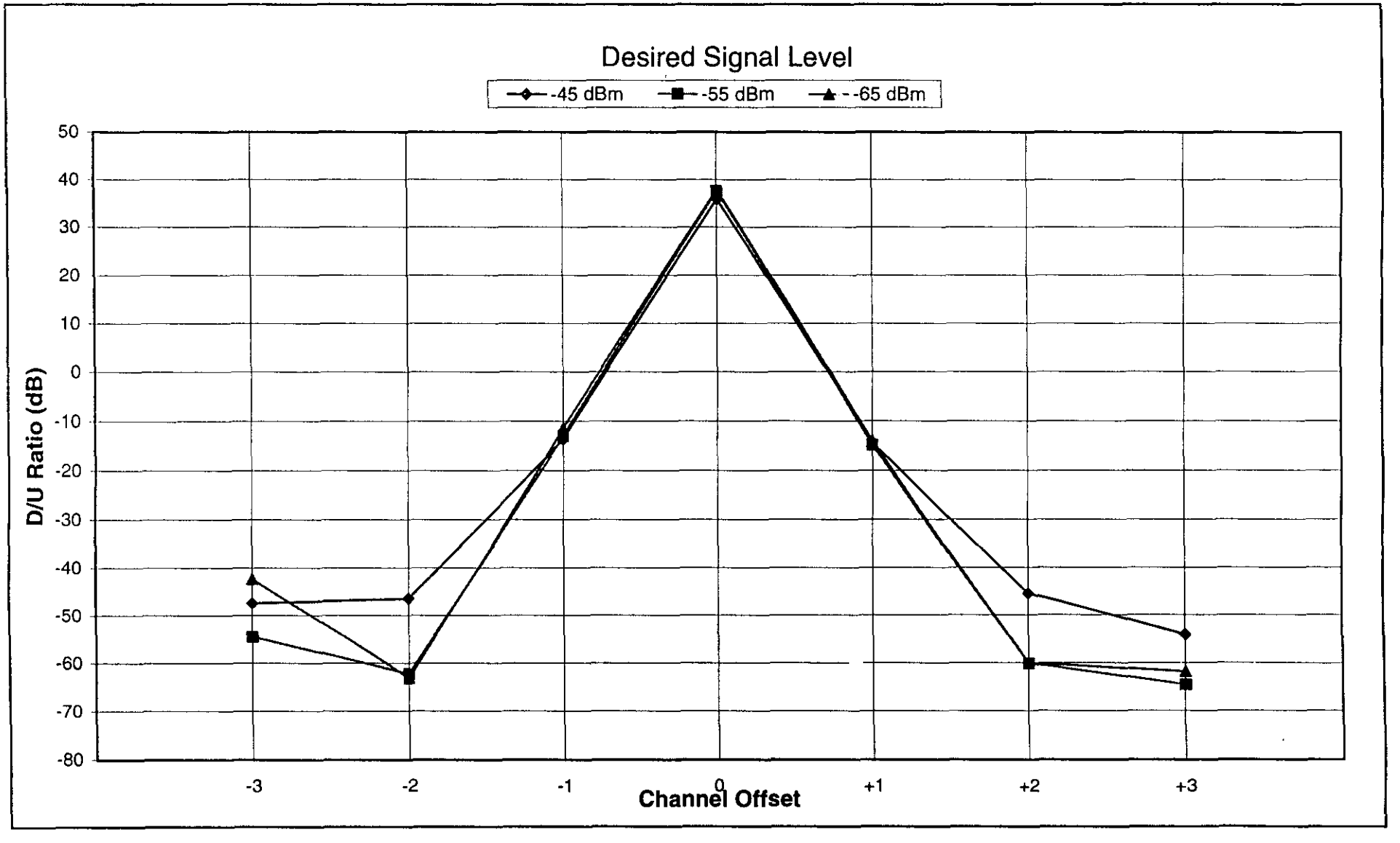


1, 2 & 3 - System limit reached for -3rd, -2nd, and +3rd adjacent channel and -45 dBm desired signal level
4, 5, 6 & 7 - System limit reached for -3rd, -2nd, +2nd, and +3rd adjacent channel and -55 dBm desired signal level
8 - System limit reached for +3rd adjacent channel and -65 dBm desired signal level

Type: Automobile

Receiver Performance

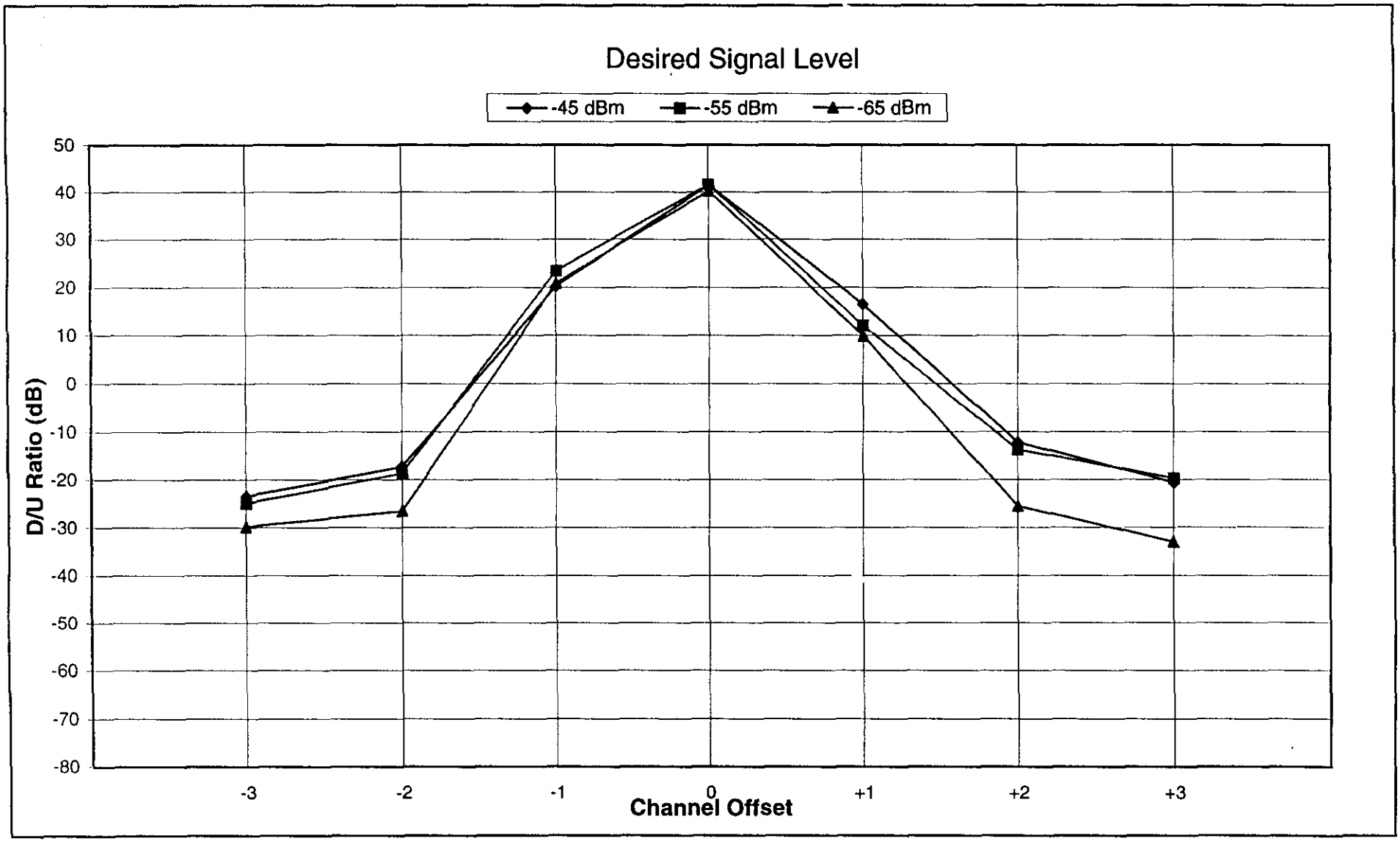
Receiver #24



Type: Automobile

Receiver Performance

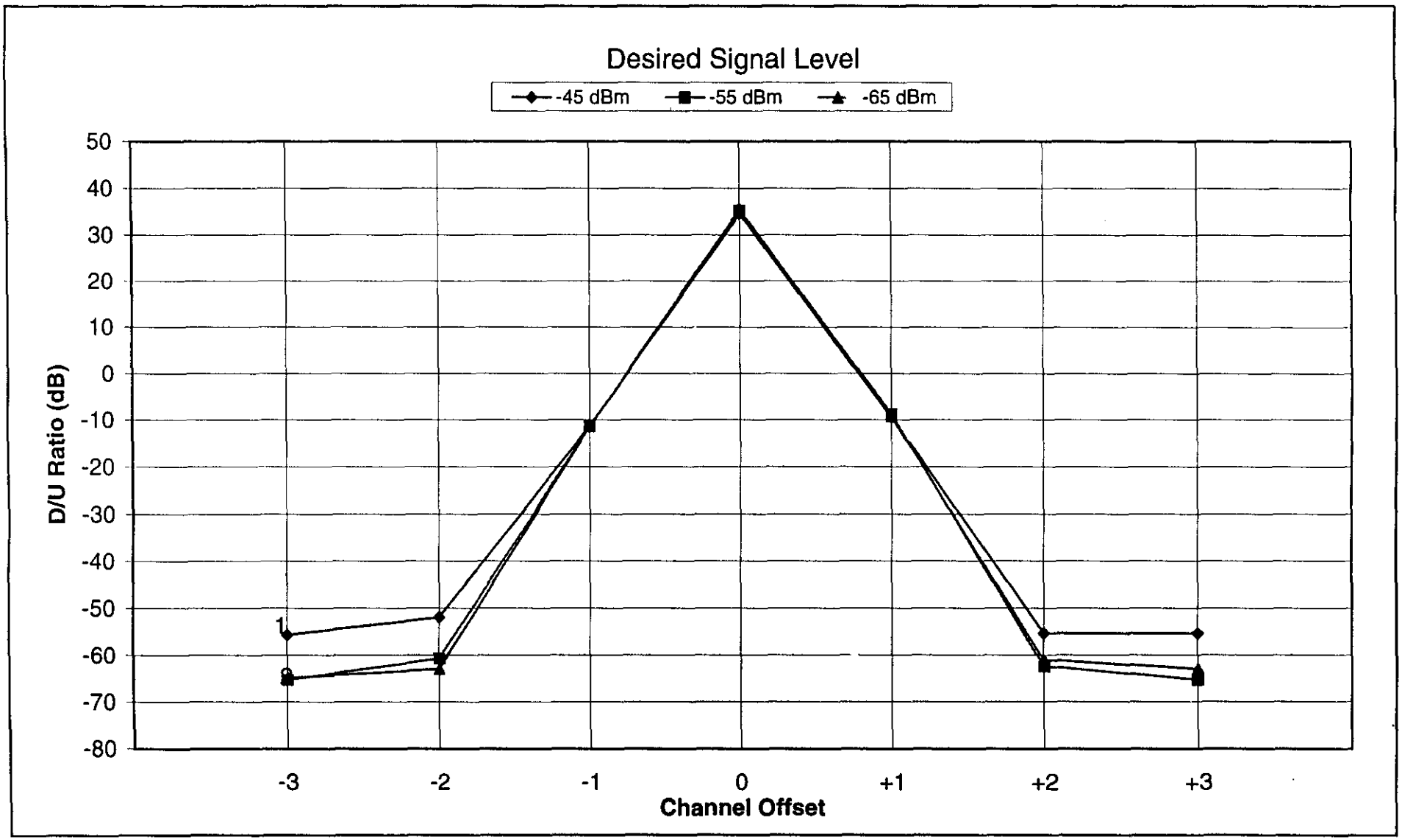
Receiver #25



Type: Automobile

Receiver Performance

Receiver #26

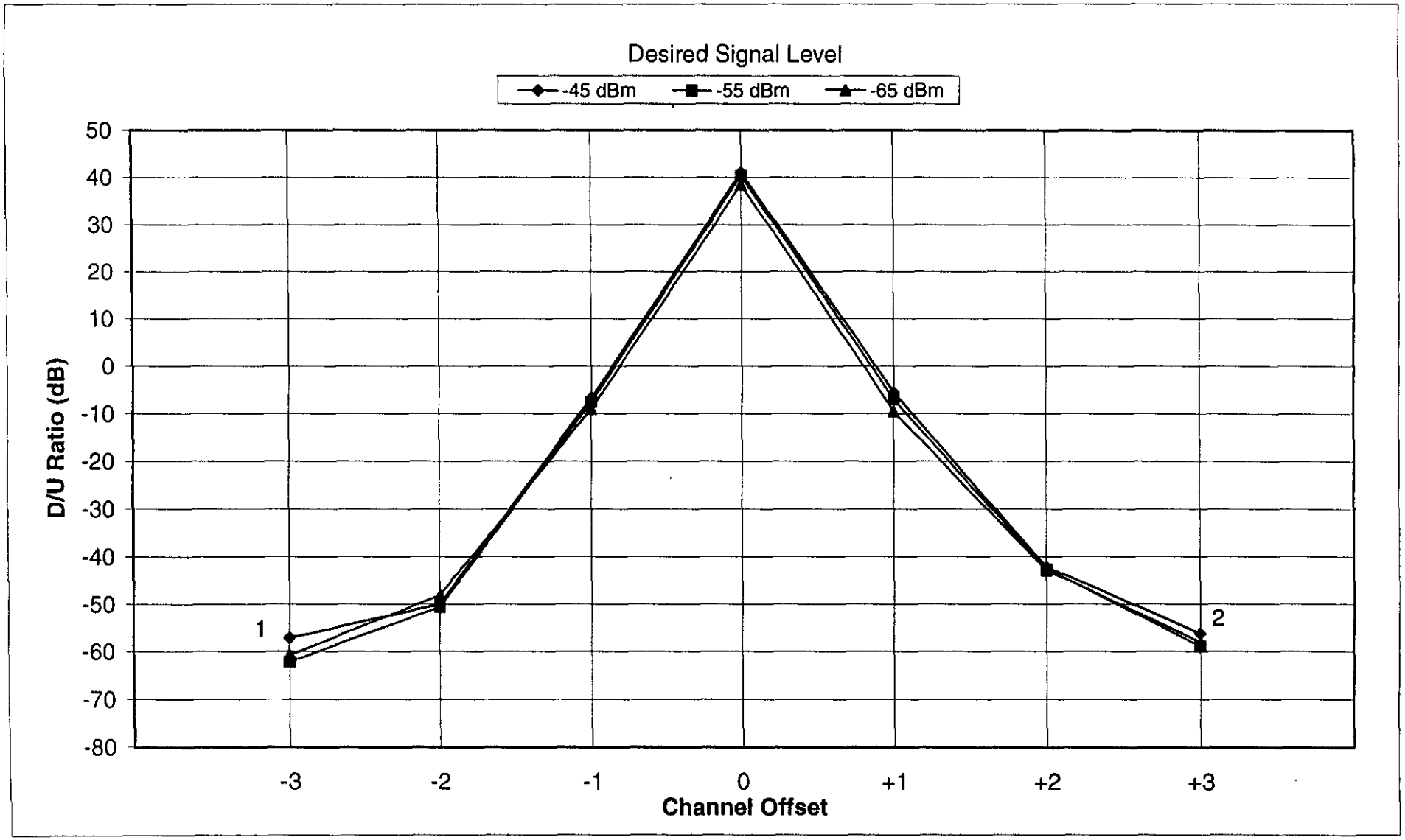


1 - System limit reached for -3rd adjacent channel and -45 dBm desired signal level
2 - System limit reached for -3rd adjacent channel and -55 dBm desired signal level

Type: Automobile

Receiver Performance

Receiver #27



1 - System limit reached for -3rd adjacent channel and -45 dBm desired signal level
2 - System limit reached for +3rd adjacent channel and -45 dBm desired signal level

Type: Automobile

Receiver Performance

Receiver #28